

other tubercular processes, much more frequently the influence seems to be favorable.

For comparison he tabulates all accessible adult cases from other sources, 187 in number (64% males, 36% females). Cure uninterrupted in 30%. Erysipelas in 12 cases, none fatal. There were 29 amputations with 6 deaths.

For further comparison he presents summary statistics of 274 variously published cases under 20 years of age. Both old and young present the same percentum (63.8) of cures, whilst amputations and deaths are slightly more frequent in the old. His final conclusions are: Resection of the knee-joint for tuberculosis in adults secures to about 64% within half a year a useful leg, and later to a further small proportion also. It is therefore entirely commendable, especially since the duration of treatment has been so much abbreviated, and wherever practicable is decidedly preferable to mutilating amputation. WILLIAM BROWNING.

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#### KOCHER ON THE TREATMENT OF OLD DISLOCATIONS OF THE SHOULDER-JOINT.<sup>1</sup>

This subject has recently been considered in the *ANNALS* (v. abstract of Knapp's article, October, 1890; p. 303-4). This only makes it more interesting to hear from such an authority in this field as Kocher.

Neglected dislocations of the shoulder are more frequent than of any other joint. This is largely owing to the fact that, according to statistics, this dislocation represents over one-half of all such injuries in the body. It is further due to the partial retention of function, so that the patient, and even physician, may not take the matter seriously. Where the patient's occupation does not require much use of the shoulder, it may even be resumed; but actively the arm is moved with the scapula or shoulder-girdle, the arm can at most be raised to the horizontal, and rotation is greatly limited. Possibly, motion may be much freer. Again, the doctor believes that he has accomplished the reduction when, in fact, he has not; or still holds to the old idea that

<sup>1</sup>Prof. T. Kocher, of Berne, *Deutsche Zeitschrift f. Chirg.*, 1890. Bd. 30. Hft. 4 and 5.

reduction is not always possible. By the use of proper methods, however, all fresh cases of dislocation of the shoulder are reducible—a point which he emphasizes.

In old dislocations the diagnosis is much easier than in new, owing to the disappearance of effusion and swelling. The relative painlessness admits a far more thorough palpation, and a certain degree of atrophy in the shoulder muscles gives better access. In fact, simple inspection usually suffices for diagnosis (as illustrated by plates). Most of the old cases are subcoracoid, some subscapular; the axillary is rare as the causative trauma is severer, the symptoms and disturbances more marked. The deceptive part is the improved mobility at the shoulder, and the nearing of the elbow to the body—the arm may even hang straight down beside the trunk—as compared with fresh cases. This reduced abduction of the arm with essentially unchanged position of the humeral head depends on the stretching of the originally tense portions of the capsule and ligaments, especially of the coraco-humeral ligament and its radiations. From this it happens that in *luxatio inveterata* much oftener than in fresh dislocations there is a difference in length; particularly in subcoracoid and sub-scapular he has observed a lengthening of 2–3–5 ctm.

In cases with complications, as fracture of the tubercles and border of the socket, the stiffness only increases with time.

The anatomical details are given of a 6 months' old subcoracoid dislocation, the patient having died from other causes; and of 8 cases that had to be subjected to bloody operation. In all but 1 of these 8 cases there was a complication with some form of fracture, usually of the tubercula. In general, his experience shows that it is not so much the attachments in the new position as changes in the old socket that interfere with reduction in these old cases; in fact, there are old dislocations in which any manipulative method of reduction, however rational, is absolutely hopeless.

As to the methods of reduction, that by hard pulling is blind, and liable do as much harm as good, by tearing nerves, vessels, etc., as collectively studied by Kortl and by Stimson (*ANNALS*, 1885). Less destructive is Polaillon's method, subcutaneous section of capsule and

adhesions, yet also liable to do harm. Better yet, is to freely open, and to divide the capsule, not so much to free the humeral head as to make a place in the socket. Complications contraindicate.

The results of resection in these old cases are not sufficiently encouraging for its general adoption. Although Ollier has described (1886) a fine functional success, the patients are, as a rule, scarcely better off than when treated orthopædically without operation. Hence, Kocher limits the indications for resection to cases where no progress or perhaps impairment of mobility, despite gymnastic practice, follows; or where difficulties arise from pressure on vessels or nerves.

In contrast to these questionable procedures he recommends his own rotation—elevation method originally applied (1870) only to fresh cases. By this means he has succeeded in reducing 25 out of 28 older dislocations, 5 of them being over 4 months old. The various published accounts of its application in neglected as well as fresh cases are briefly noted. Although this method was again recommended by Kocher at the London International Congress, 1881, his present description of it may be worth reproducing. “The abducted elbow is slowly but forcibly pressed against the trunk in order to push the humeral head firmly against the anterior border of the socket for the subsequent rotation. To gain a surer hold for rotation it is best to shove the elbow backwards and have it as much as possible approximate the median line behind the body. With the arm flexed to a right angle at the elbow, rotation outwards is now performed, one of the operator’s hands grasping the elbow, the other the wrist. This movement also is executed very slowly, opposition being gradually overcome until the forearm is directed straight outwards (laterally). If this manœuvre does not cause the deltoid to be distinctly forced up by the head of the humerus, it is advisable to assist the outward movement of the head by pulling at a compress under the arm. Carafi’s proposition to wait a minute after finishing the rotation outward is entirely commendable. This we had often previously done, as the gradual relaxation of tension allows the rotation outward to be somewhat increased. To be approved also is Jersey’s proposition to exert downward traction on the

arm during the first two acts. In this way the tension of the upper capsular wall, which we aim to use, is appropriately increased and thereby the rotation about the fulcrum at the anterior border of the socket insured.

Now follows the third act. Whilst the arm is held unchanged in outward rotation, the elbow is pushed forward in the sagittal plane of the body, very slowly but forcibly, as high as possible, when the outward rotation is gradually relaxed, and finally the hand is laid across the breast to the other side, *i e*, the arm is rotated inward.

During this whole time no single, sudden or jerky motion is made. True, however, each of the movements must be completed with a certain force.

For the greater resistance to reposition of old in contrast to fresh dislocations depends on the added resistance of adhesions that to be ruptured demand a certain expenditure of force."

He still bases the method on the fixation of the shoulder in dislocations, by a Y-ligament analogous to that of Bigelow at the hip. of which, at the shoulder, two illustrations are given in explanation.

He emphatically asserts that, it is not irregular adhesions between caput and scapula, which impede reduction, but that the adhesions are predominantly about the old capsular tear between the border of the socket and the anatomical neck.

As misfortunes in his attempts at reducing old cases by this method may be mentioned 3 fractures, 2 simply of the head of the humerus and 1 in the middle of the diaphysis; but the latter was from a necessarily hasty attempt and on an elderly (white-haired) woman.

In 16 of his 33 successes narcosis was not employed. A table of the 28 cases treated by manipulation and of 8 treated by operation closes the article.

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